

REMARKS

In accordance with the foregoing, claims 22-26 are amended. Claim 43 is added. No new matter is believed to be added. Withdrawn claims 27-42 are cancelled without prejudice or disclaimer of the subject matter. Claims 22-26 and 43 are pending and under consideration.

CLAIM REJECTIONS UNDER 35 U.S.C. §102

Claims 22 and 23 are rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 5,304,843 to Takubo et al. (hereinafter "Takubo").

Claims 22-26 are amended herewith to simplify and therefore clarify the claim language. No new matter or new features are added.

Takubo discloses a semiconductor device including a semiconductor element with a plurality of terminals, a resin film having a hole in which the semiconductor element is mounted, and a plurality of lead wires formed on a first surface of the resin film (see Takubo's Abstract).

The Office Action takes the position that the semiconductor chip 114 in Tabuko (see FIG. 7 of Tabuko reproduced below) corresponds to the electrical component recited in claim 22.

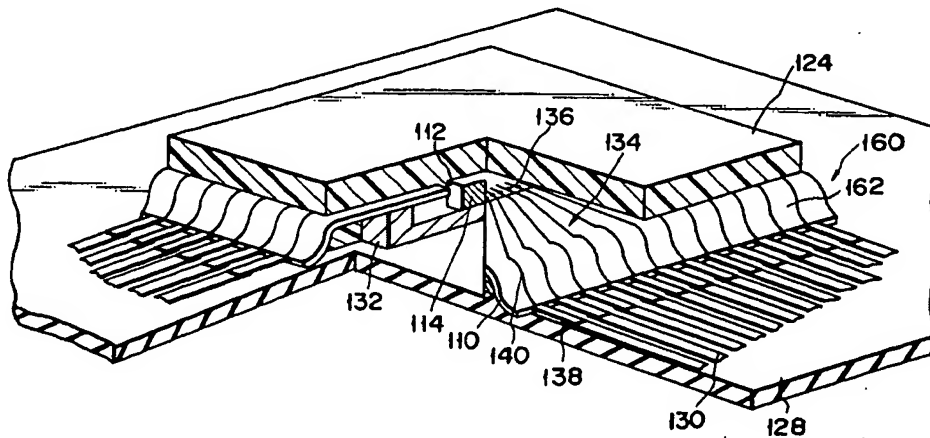


FIG. 7

However, the semiconductor chip 114 is NOT "arranged on a surface section of the substrate," the substrate 128 in Tabuko being indicated in the Office Action as corresponding to the substrate recited in claim 22. A heat radiation substrate 132 is provided between the semiconductor chip 114 and the substrate in Tabuko (see also FIG. 8 in Tabuko). Even if the substrate 132 were removed, "a filler having good thermal conductivity" would still interpose

between the substrate 128 and the semiconductor chip 114 in Tabuko (see col. 5, lines 290-30 in Tabuko).

Further, the Office Action indicates the lead wire 134 in Tabuko as corresponding to the lug recited in claim 22. The bottom ground conductor 154 and the metal films 160 of Tabuko are indicated as corresponding to the "at least one electrically-conductive film" recited in claim 22. However, as illustrated in FIG. 9 of Tabuko (reproduced below), the bottom ground conductor 154 and the metal films 160 are NOT even in contact with the lead wire 134 in Tabuko (see also col. 5 lines 31-37 of Tabuko). Therefore, the indicated surfaces do not anticipate or render obvious the "at least one electrically-conductive film" of the at least one lug as recited in claim 22.

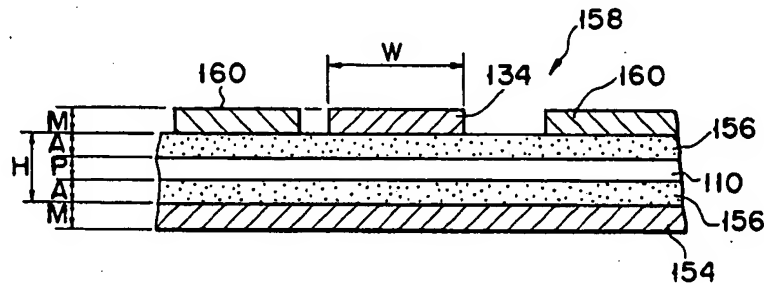


FIG. 9

At least for these reasons, Applicants respectfully submit that Tabuko does not anticipate independent claim 22.

Relative to claim 23, the Office Action suggests that the film carrier 158 having a resin film 110, adhesive sheets 156 formed on both sides of the resin film 110, a bottom ground conductor 154 and metal films 160 formed on opposite sides of the film carrier, on the adhesive sheets 156, renders obvious the "at least one electrically-conductive film" of the lug. However, as illustrated in FIG. 8 of Tabuko reproduced below, the film carrier 158 in Tabuko is NOT in contact with the semiconductor chip 114 Tabuko, which the Office Action indicates as corresponding to the electrical component. Therefore, the film carrier 158 does NOT correspond to the "at least one electrically-conductive film having an electrical connection surface in electrical contact with the contact surface of said electrical component" as recited in claim 22. It is therefore inappropriate to consider the structure of the film carrier 158 as anticipating or rendering obvious the features recited in claim 23 relative to the electrically-conductive film.

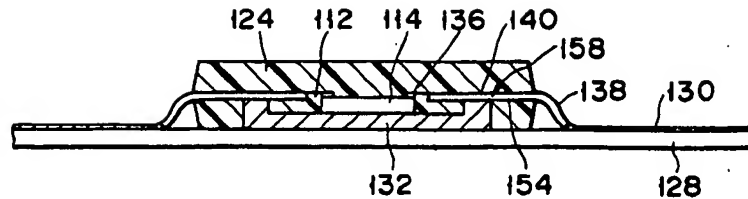


FIG. 8

In view of the above arguments, independent claim 22 and claim 23 depending from claim 22 patentably distinguish over Tabuko.

CLAIM REJECTIONS UNDER 35 U.S.C. §103

Claims 24-26 are rejected under 35 U.S.C. §103(a) as allegedly being obvious over Tabuko in view of U.S. Patent No. 6,687,108 to Anthony et al. ("Anthony").

As argued above, the film carrier 158 of Takubo does not anticipate the at least one electrically-conductive film of the lug as recited in claim 22. Moreover the bottom ground conductor 154 and metal films 160 are not arranged to produce opposing magnetic fields. The Office Action relies on Anthony as teaching "the at least two electrical conductor layers and the insulation layer of the laminated interconnect are arranged to produce opposing magnetic fields in the at least two electrical conductor layers upon electrical activation" as recited in claim 24.

However, Anthony's teachings cannot be combined with Takubo's structure. In order to produce opposing magnetic fields that substantially cancel each other, currents flowing in both conductor layers should be about equal and having opposite directions. The bottom ground layer 154 (of Fig. 9 in Takubo) appears not to be controllable to have a current equal and opposite to the current flowing in the metal layer 160. Therefore, a skilled person would not be able to apply Anthony's teachings to Takubo's device. The magnetic cancellation does not appear to be usable in Tabuko's device.

Additionally, Applicants found no evidence that Anthony corrects or compensates for the above-identified failure of Tabuko to anticipate all the features recited in claim 22.

At least for these reasons, claim 24 and claim 25 and 26 depending from claim 24 patentably distinguish over Anthony and Tabuko.

NEW CLAIM 43

New claim 43 is directed to an electronic device including a substrate a power semiconductor chip and an electrical contact lug. The new claim is supported by the originally

filed application. No new matter is added. Claim 43 patentably distinguishes over the prior art at least by reciting

an electrical contact lug having

a laminated interconnect as an electrically-conductive film in electrical contact with the contact surface of the power semiconductor chip, the laminated interconnect having at least two electrical conductor layers, which are substantially in a coplanar arrangement, and at least one electrical insulation layer arranged between the at least two electrical conductor layers, the at least two electrical conductor layers and the insulation layer being arranged to produce opposing magnetic fields in the at least two electrical conductor layers upon electrical activation, and

an area extending beyond the contact surface of said electrical component.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

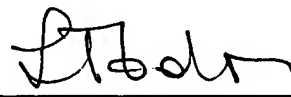
Respectfully submitted,

STAAS & HALSEY LLP

Date:

Sept. 23, 2009

By:



Luminita A. Todor
Registration No. 57,639

1201 New York Avenue, N.W., 7th Floor
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501